



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

February 23, 1988

Mr. Allen S. Gordon
Manager of Engineering
Western States Minerals Corporation
4975 Van Gordon Street
Wheat Ridge, CO 80033

Dear Mr. Gordon:

Re: Mine and Reclamation Plan Review, Tug Mine, M/003/007, Box Elder County, Utah

We have reviewed the Tug Mine and Reclamation Plan which was received on January 28, 1988. While the plan is generally acceptable, several areas of concern exist which must be adequately addressed before we can grant tentative approval. The following comments identify the specific areas of concern. Each comment is referenced back to the section and page of the plan.

I. General Information, Page 2, Item 9

All the owners will have to be notified before the Division can give final plan approval.

III. Operation Plan, Page 4, Item 3

The depth to groundwater will have to be determined. This information in conjunction with the geologic information (Item 17) will provide a basis for evaluating any potential adverse effects on the groundwater hydrology. A summary of the data submitted to the Bureau of Water Pollution Control will probably be sufficient to answer our general concerns.

III. Operation Plan, Page 5, Item 12

Please provide the results of the chemical analysis conducted on the waste rock in order to document the non-toxic nature of this material. If exploratory drilling has indicated the presence of sulfide minerals, please provide a description of how this material will be handled and the approximate tonnages involved.

III. Operation Plan, Page 7. Item 17

Please provide a description of the project site geology. This information should be supported by geologic cross sections and a geologic map which clearly identifies faults and fracture zones in the project area.

VI. Variance, Page 10

You have requested a variance to the reclamation standards on impoundments and highwalls with regard to the pit. Judging by the statements made in the project description, variances for land use and revegetation should also be made on the pit area. The areas to be effected by the variances should be delineated on a map. A short narrative statement justifying the need for the variances should also be attached. Approval for these variances will be more easily obtained if the following commitments and information are included in the narrative:

- (1) A commitment to erect a rock safety berm around the steeper areas of the pit.
- (2) Limit the variance request to only those areas of the pit where it is impractical to perform reclamation. As an example, the ramp leading into the pit at the south end appears to be reclaimable.
- (3) A letter from the surface land owner agreeing to the leaving of the pit as is.
- (4) A general commitment to backfill this pit if additional pits are developed by Western States in the immediate area at some future time.

A variance to the reclamation of the improved access road will be deferred until the time of reclamation. Jerry Mansfield, State Lands and Forestry, has indicated that they would probably want to keep the improved road for post mining useage. We will not include the road in the bond estimate.

VII. Surety, Page 10

The monitoring cost of \$2000 can be ommitted from the estimate since the state will bear this cost in the unlikely event of bond forfeiture. The following items should be added to the reclamation bond estimate:

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- (1) A heap decommissioning cost. Calculations should also be provided to substantiate this cost.
- (2) The cost to reclaim the diversion ditch north of the heap leach area should be included.
- (3) The total estimate (contingency included) should be escalated at 2.3 percent per year for the life of the project to allow for projected inflation.

VIII. Signature Requirement, Page 10

The notice of intention must be signed by a representative of the company.

The requested additional information should be formatted so that it can be inserted directly into the current notice of intention (i.e., replacement pages). This practice will ensure that we will both have a workable and readable plan for the future.

Thank you for your cooperation. Should you wish to discuss any of the above items in detail, please call me or Dave Wham.

Sincerely,



Frank J. Filas
Reclamation Engineer

ff

cc: L. Braxton
D. Wham
H. Shepherd
J. Mansfield, State Lands
T. Hughes, Western States

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